

Introductory
to the
Course at the
Penn. Coll. of Dental Surgery

November 2nd 1868.

on
Anesthesia.



"Life is short, and art is long:"
these are ~~words~~ written at the beginning of a
famous ~~tract~~ of him who has been well called the
father of medicine.

Our art, of Medicine ~~being~~, not only
^{in its history} ~~the~~ ^{illustration} of its needful labors,
long, but ^{its} also of wide scope — of
deep foundations, and high ascent. It stands
related to all learning, natural & human —
^{a structure, a temple,}
It is of vast proportions. No wonder,
then, that, growing as medical & surgical
art have since the days of the barber-
^{of one or two centuries ago,}
-surgeons — Subdivision should have
been natural, & should have gone on, —
& should yet go on. — In some neigh-
borhoods, the old assemblage of duties, in
^{the} rural isolation of the practitioner, yet

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continues, many a country doctor
must yet practice all the medicine,
surgery, ^{and} dentistry of his surrounding
region; many, some of them must do ^{even} more,
— almost everything, besides cultivating
their own farms and gardens &
being schoolmasters to their own children;
as a friend of mine ^{once} found, when he
was called upon at night in great
haste, by a woman whose family he
attended. "Well, my good woman, what
do you want?" — "O, Doctor, my child
wandered out, and is lost; ^{Dear doctor,} what shall I
do?" — What recipe for disorganizing lost
children the doctor had to give, I do
not know. — ^{But} ~~can~~ Can any one pretend that
it is possible for such very general,
all-embracing practice to be so good,

(3.)

& skilful ^{so} successful as it
maybe where in larger and
more famed communities there is
Subdivision? Certainly not.

Subdivision of labor always
promotes skilled labor. This is a-
bundantly known in the mechanic arts.
In the making of a single pin & adze
or more artisans maybe engaged; each
busied with his ~~own~~ special part
in the process.

Therefore it is well that
there should be those who devote
themselves especially to medical
practice ~~to surgery~~ to obstetrical
to surgical ^{practice} to ophthalmic and to
dental surgery. Thus the interests
of all are advanced.

(4)

But, something must be added
to this thought. The natural &
rational order of all evolution
is from the general to the special,
the pin-point or pin-head or
pin-shaft make maybe a mere
mechanic; almost a machine like
that which he handles. But
professional work and professional
aims & requirements are higher
than that. Science is ~~required~~
for these. Cultivated intelligence
may, it is true, be employed upon
merely mechanical vocations, having
^{room for} many-sided capacities. This is made
possible in our country, by the diffusion
of common education. So, it was well

Known during our late war, (5)
that, in the army of the United
States, many regiments contained
men who were ready for every-
thing that might be wanted for
the various & constantly changing re-
cessities of war. If a railroad was
torn up, they could relay the rails;
if a locomotive was broken, they
could repair it. ^{They were ready for horse, foot or artillery service.} If a proclamation
or article of war ^{or article of treaty} was to be written, they could do that
too; or, if ^{they could} need be, command the regiment,
brigade or ^{division} ^{& plan a campaign}, and then be prepared
to run for president afterwards. It
has been said, that every live American
who has been through a public school
~~down a long horse team~~
can ~~keep a hotel~~ ^{drive a four horse}
^{team,} ~~keep a hotel,~~ ^{engineer a railroad,}
^{sail a ship,} ^{command an army,}

and occupy the White-house ^{to}
with ^{proper} dignity. Out of well-
land and many-sided general
preparation comes the best
capacity for special devotion
to particular ends, and special
success in their pursuit.

Therefore again I say, that
it is ^{very important} well ^{it} for all specialists,
in ~~the~~ ^{their} vocation of dental surgery,
for ~~our~~ ^{and} example, to be general
students also; to be scientific
professional men in order that
they may be skilful dentists.
For merely selfish professional
interest this is well; because
all successful art has its securest

basis in accurate science and in (7)
scientific methods of training. But
I would urge upon you all,
and I am sure that in this
I have the cordial approval of
all of our faculty, a yet higher
aim and motive. Love science,
and elevated skill, - and the advancement
of science and perfection of skill,
for their own sakes, and for
the sake of our common humanity.
I would not exaggerate the
view of the philanthropic nature
of the healing arts - we must
not claim too much excess of dis-
-interestedness for one profession
as compared with almost all others -

but I would say that there ⁽⁸⁾ ~~is~~
in every profession room for
this largeness and nobleness
of aim — and most of all, it
does appear, — in every profession
which has science at its basis,
~~that~~ ^{— being} science, always cap-
able of progress.

For, all the sciences are
kindred to each other, and
are servicable to all arts.
No man knows, when he makes
a discovery, what possible benefit,
far out of the range of his
own operations, may come
out of it. Did he who, in a

remote country) first noticed (9
the elastic property of the
juice of the Caoutchouc tree,
imagine the thousandth part
of the uses to which rubber
has been put? Or he who,
very long ago, found that gold
was not acted upon by common
acids that ~~the~~ tarnished
or corroded other metals, did he
dream of the values ^{of gold} in either cur-
rency or the arts?

And, however great or little
may be the pecuniary success
which remarkable discoveries and
inventions bring to their originators,
I think that the nobleness of
such achievements may be, sometimes

at least, estimated by the elevation and unselfishness of ^{acted out.} their motives. To earn honorable independence is always a legitimate purpose. With reasonable prudence, it is not incompatible with this to look out also for opportunities of advancing science, diminishing suffering, and promoting the general interests of humanity.

In illustration of this combination of aims, I have thought it not inappropriate to recall ~~the~~ ^{to you} at this time an outline of the history of a discovery which has shed greater lustre than any other upon the annals of American dentistry. I mean the discovery of anaesthesia.

~~Plutarch's~~
 Ancient Greece

Cane ^{S. side} of Mt. Parnassus — sheep
 underneath — mistresses of Oracle of
 Apollo at Delphi.

Now, go to Del Cane near
 Naples — described long ago by Pliny —
 Carbon and gas —

Egyptian repentance, Homer,
 causing forgetfulness — in Ulysses and his
 companions —
 "Woe of the condemned" of the
 Old Testament — draught offered to
 Christ upon the cross —

Herodotus mentions a practice of
 the Scythians, inhaling vapor made
 from hempseed to ^{produce} intoxication —

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Marco Polo and others tell of
the wonderful effects of ^{Indra hemp} ~~the~~ upon the
fellows of the Old Man of the
Mountain of Syria — who be —
Asheesh now —

~~After~~ In 1298, Theodoric
of Italy used a narcotic inhalation
(from a "spongia somnifera") to prevent
pain. The ingredients are recorded;
opium, hyoscyamus, hemlock, man-
drazora and lettuce being among
them. Dauriol, a French physician
follows Theodoric's directions, narrates
the history of 5 painless operations.

Baptista Porta (1589) describes
a sleeping apple, the smell of which

binds the eyes with a deep (14)
sleep; also, a quintessence extracted
from plants which, put under
the nostrils of a sleeper, would
overwhelm with profound sleep

In Arabian Nights Entertainments
Caliph Harun al-
amir al-Amin
suddenly putting asleep about Hassan
by throwing powder into his cup -
It is Eastern the Slave of Love
a woman locked in a chest remained
asleep and lay as a piece of
narcotic drug in his
mouth.
Shakespeare, in Romeo
Juliet -

(15)

✓ The distilled liquor drink them off -
When presently this all thy veins shall run
A cold & drowsy humor, which shall seize
Each vital spirit: for no pulse shall
beat
This natural progress, but succumb to
No warmth, no breath, shall testify their
Lust;
The roses in thy lips & cheeks shall fade
To pale ashes; thy eye windows fall
Like death, when he shuts up the day of life."

& again in Cymbeline;
"but there is
No danger in that show of death it makes,
More than the locking up the spirits a time,
To be more fresh reviving."

Another Winter Throat,

Middleton, 1657, — even (16
now remarkably says —

I'll imitate the pities of old surgeons
to this lost limb, who, seeing them the work,
Cast one asleep; then cut the ~~dissect~~ ^{dissect} part.

Mesmer, 1776 venue Paris

some success in operation

In 1828, Hickman of London
offered to Dr. King Ch. X, by introducing
gases into lungs, to prevent pain
of all operations. Not accepted
or feared. Probably Carb and gas

But the great conception
of anaesthesia in modern times dates
from 1799, when L. Humphreys Davy,

not yet arrived at the height of (17)
his great fame, experiments with
Nitrous oxide — &

recorded the expectation in
a published work, now extant,
that that gas "may probably be
used to advantage during Surgical
Operations, to destroy physical

Pain?"

This prophecy was, however,
long overlooked & forgotten.
When I was a student of
Medicine & hospital resident,
for 1840¹⁸⁴⁶ to 1848, —

laudamus —
the use of inhalations for disease.

Elmer was known a long ⁽¹⁸⁾ ago as
the 13th century, when it was mentioned
in the writings of Raymond Lully,

Horace Wells — ^{his share —}
^{Colt's exhibit + Corley —}
^{Dec. 11th 1844 —}

Mr. T. B. Morton —

his efforts — & progress — & aid from
Dr. C. E. Jackson & Mr. Mitchell &
others —

his success — ^{30th Sept. 1846}
^{Elmer the first}

his first hospital opened, Oct 10th 1846

Dr J. C. Warren, Mass. Gen. Hospital.

his ambition — engrossment

neglect of business — Opposition —

real claims — Disappointments — Failure
Summary — Share of Davy — Wells — Morton — Jackson

Other anesthetics —

(19)

Chloroform, disc. 1831 by ~~Antoine~~
Antoine —

Used as an anesthetic by

Dr. Simpson of Edinburgh 1847

Carbon acid — bichloride
of methylene, tetrachloride of carbon,
nitrate of amyl —

Local anesthetics — by

carb. acid, ether, chloroform —

Congelation — ether spray Rubens
hydrogen —

Nitrous oxide —

Challenge & refusal of Dr May at
Washington — Richardson contempt 20

Dr Joseph W Smith of New

Haven & Mr G. L. Colton,

June 1863 —

Subsequent progress, &
Europe & the continent —

Dr Barker —

Liquor — Dr Evans

Rare now —

Rationale of anesthesia?

Excitation? — how then local?

NO may be, though

future of anesthetics —
CO₂? —

(21)
Moral of Mortons
career — higher aims
& greater problem both
wanted

Conclusion, believe

— Congratulate —

Phil & wife's last dentistry

& their Phil & wife's last dentistry

last dentistry collection

As I am not a member of the

dentist profession, I am not

sorry that I believe there is little

opportunity any where to attain pro-

ficiency in the science of dentistry — Let
us hope for your effected progress & success in both.





